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| FORM PTO-1300<br>(REV. 11-2000)   |  | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE |  | ATTORNEY'S DOCKET NUMBER<br><b>34907/GM/1p</b>                                   |  |
| <b>TRANSMITTAL LETTER TO THE UNITED STATES<br/>         DESIGNATED/ELECTED OFFICE (DO/EO/US)<br/>         CONCERNING A FILING UNDER 35 U.S.C. 371</b>   |  |   |  | U.S. APPLICATION NO. (If known, see 37 CFR 1.5<br>Still unknown <b>08/869841</b> |  |
| INTERNATIONAL APPLICATION NO.<br><b>PCT/EP00/11159</b>  |  | INTERNATIONAL FILING DATE<br><b>NOVEMBER 10, 2000</b>   |  | PRIORITY DATE CLAIMED<br><b>NOVEMBER 18, 1999</b>                                |  |
| TITLE OF INVENTION<br><b>SHOWER APPARATUS</b>   |  |   |  |  |  |
| APPLICANT(S) FOR DO/EO/US<br><b>Filippo MONTANARI</b>   |  |   |  |  |  |
| Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:   |  |   |  |  |  |
| <ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a filing under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.</li> <li>4. <input type="checkbox"/> The US has been elected by the expiration of 19 months from the priority date (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))           <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))           <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371 (c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).</li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).</li> </ol> <p style="margin-top: 10px;"><b>Items 11 to 20 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>11. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.</li> <li>12. <input checked="" type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>13. <input checked="" type="checkbox"/> A <b>FIRST</b> preliminary amendment.</li> <li>14. <input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.</li> <li>15. <input type="checkbox"/> A substitute specification.</li> <li>16. <input type="checkbox"/> A change of power of attorney and/or address letter.</li> <li>17. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 35 U.S.C. 1.821 - 1.825.</li> <li>18. <input type="checkbox"/> A second copy of the published international application under 35 U.S.C. 154(d)(4).</li> <li>19. <input type="checkbox"/> A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).</li> <li>20. <input checked="" type="checkbox"/> Other items or information: <b>redrafted claims 20 to 38 for entering the preliminary amendment and new abstract of the disclosure.</b></li> </ol> |  |   |  |  |  |

|   |   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
|---|---|---|-------------------------------|---------------------|-----------------|-----------|--------------|-----------|--|-----------|----|--------------------|---------|--|-----------|----|--|--|--|------------|----|--|-----------|---------------|
| U.S. APPLICATION NO. 09/069841<br><b>St0121869841</b>   | INTERNATIONAL APPLICATION NO.<br>PCT/EP00/11159 | ATTORNEY'S DOCKET NUMBER<br>34907/GM/1p   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| 21. <input checked="" type="checkbox"/> The following fees are submitted:<br><b>BASIC NATIONAL FEE</b> (37 CFR 1.492 (a) (1) - (5)):<br>Neither international preliminary examination fee (37 CFR 1.482)<br>nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO<br>and International Search Report not prepared by the EPO or JPO. .... \$1000.00<br>International preliminary examination fee (37 CFR 1.482) not paid to<br>USPTO but International Search Report prepared by the EPO or JPO ..... \$860.00<br>International preliminary examination fee (37 CFR 1.482) not paid to USPTO<br>but international search fee (37 CFR 1.445(a)(2)) paid to USPTO ..... \$710.00<br>International preliminary examination fee (37 CFR 1.482) paid to USPTO<br>but all claims did not satisfy provisions of PCT Article 33(1)-(4) ..... \$690.00<br>International preliminary examination fee (37 CFR 1.482) paid to USPTO<br>and all claims satisfied provisions of PCT Article 33(1)-(4) ..... \$100.00<br><b>ENTER APPROPRIATE BASIC FEE AMOUNT =</b> |   | <b>CALCULATIONS PTO USE ONLY</b><br><br><table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>860. =</b></td> </tr> </table>                                | <b>\$</b>                     | <b>860. =</b>       |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>860. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| Surcharge of \$130.00 for furnishing the oath or declaration later than<br>months from the earliest claimed priority date (37 CFR 1.492(e)). <input type="checkbox"/> 20 <input type="checkbox"/> 30<br><table style="width: 100%;"> <tr> <td style="width: 20%;"><b>CLAIMS</b></td> <td style="width: 20%;"><b>NUMBER FILED</b></td> <td style="width: 20%;"><b>NUMBER EXTRA</b></td> <td style="width: 20%;"><b>RATE</b></td> <td style="width: 20%;"><b>\$</b></td> </tr> <tr> <td>Total claims</td> <td>19 - 20 =</td> <td></td> <td>x \$18.00</td> <td>\$</td> </tr> <tr> <td>Independent claims</td> <td>1 - 3 =</td> <td></td> <td>x \$80.00</td> <td>\$</td> </tr> <tr> <td colspan="3"><b>MULTIPLE DEPENDENT CLAIM(S) (if applicable)</b></td> <td>+ \$270.00</td> <td>\$</td> </tr> </table>  |   | <b>CLAIMS</b>   | <b>NUMBER FILED</b>           | <b>NUMBER EXTRA</b> | <b>RATE</b>     | <b>\$</b> | Total claims | 19 - 20 = |  | x \$18.00 | \$ | Independent claims | 1 - 3 = |  | x \$80.00 | \$ | <b>MULTIPLE DEPENDENT CLAIM(S) (if applicable)</b> |  |  | + \$270.00 | \$ | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>860. =</b></td> </tr> </table> | <b>\$</b> | <b>860. =</b> |
| <b>CLAIMS</b>   | <b>NUMBER FILED</b>                             | <b>NUMBER EXTRA</b>   | <b>RATE</b>                   | <b>\$</b>           |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| Total claims  | 19 - 20 =                                       |   | x \$18.00                     | \$                  |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| Independent claims  | 1 - 3 =   |   | x \$80.00                     | \$                  |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>MULTIPLE DEPENDENT CLAIM(S) (if applicable)</b>  |   |   | + \$270.00                    | \$                  |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>860. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. The fees indicated above<br>are reduced by 1/2.  |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>430. =</b></td> </tr> </table>  | <b>\$</b>                     | <b>430. =</b>       |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>430. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>SUBTOTAL =</b>   |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>430. =</b></td> </tr> </table>  | <b>\$</b>                     | <b>430. =</b>       |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>430. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| Processing fee of \$130.00 for furnishing the English translation later than <input type="checkbox"/> 20 <input type="checkbox"/> 30<br>months from the earliest claimed priority date (37 CFR 1.492(f)).   |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"></td> </tr> </table>   | <b>\$</b>                     |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   |   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>TOTAL NATIONAL FEE =</b>   |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>430. =</b></td> </tr> </table>  | <b>\$</b>                     | <b>430. =</b>       |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>430. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be<br>accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +   |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>40. =</b></td> </tr> </table>   | <b>\$</b>                     | <b>40. =</b>        |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>40. =</b>                                    |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>TOTAL FEES ENCLOSED =</b>  |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>\$</b></td> <td style="width: 50%;"><b>470. =</b></td> </tr> </table>  | <b>\$</b>                     | <b>470. =</b>       |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>\$</b>   | <b>470. =</b>                                   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| a. <input type="checkbox"/> A check in the amount of \$ _____ to cover the above fees is enclosed.<br>b. <input checked="" type="checkbox"/> Please charge my Deposit Account No. <u>13-3860</u> in the amount of \$ <u>470. =</u> to cover the above fees.<br>A duplicate copy of this sheet is enclosed.<br>c. <input checked="" type="checkbox"/> The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any<br>overpayment to Deposit Account No. <u>13-3860</u> . A duplicate copy of this sheet is enclosed.<br>d. <input type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card<br>information should not be included on this form. Provide credit card information and authorization on PTO-2038.   |   | <table style="width: 100%;"> <tr> <td style="width: 50%;"><b>Amount to be refunded:</b></td> <td style="width: 50%;"><b>\$</b></td> </tr> <tr> <td><b>charged:</b></td> <td><b>\$</b></td> </tr> </table> | <b>Amount to be refunded:</b> | <b>\$</b>           | <b>charged:</b> | <b>\$</b> |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>Amount to be refunded:</b>   | <b>\$</b>                                       |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>charged:</b>   | <b>\$</b>                                       |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| <b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR<br>1.137 (a) or (b)) must be filed and granted to restore the application to pending status.  |   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| SEND ALL CORRESPONDENCE TO:<br><b>MODIANO &amp; ASSOCIATI</b><br>Via Meravigli, 16<br>20123 MILANO - ITALY<br>EUROPE<br>Tel.: (003902) 85.90.77.77<br>Milano, Italy - June 27, 2001   |   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |
| SIGNATURE<br><br><b>MODIANO Guido</b><br>NAME<br><b>19,928</b><br>REGISTRATION NUMBER  |   |   |                               |                     |                 |           |              |           |  |           |    |                    |         |  |           |    |  |  |  |            |    |  |           |               |

Docket Number (Optional):  
34907/GM/1p

Applicant or Patentee: **Filippo MONTANARI**

Application or Patent No.

Filing Date or Issue Date:

Title: SHOWER APPARATUS

I hereby declare that I am

☐ the owner of the small business concern identified below:

☒ an official of the small business concern empowered to act on behalf of the concern identified below:

NAME OF SMALL BUSINESS CONCERN **CALIBE S.r.l.**

ADDRESS OF SMALL BUSINESS CONCERN **Via Provinciale, 116**

40056 CREPELLANO - ITALY

I hereby declare that the above identified small business concern qualifies as a small business concern as defined in 13 CFR 121.12, and reproduced in 37 CFR 1.9(d), for purposes of paying reduced fees to the United States Patent and Trademark Office, in that the number of employees of the concern, including those of its affiliates, does not exceed 500 persons. For purposes of this statement, (1) the number of employees of the business concern is the average over the previous fiscal year of the concern of the persons employed on a full-time, part-time or temporary basis during each of the pay periods of the fiscal year, and (2) concerns are affiliates of each other when either, directly or indirectly, one concern controls or has the power to control the other, or a third party or parties controls or has the power to control both.

I hereby declare that rights under contract or law have been conveyed to and remain with the small business concern identified above with regard to the invention described in:

☒ the specification filed herewith with title as listed above.

[ ] the application identified above.

☐ the patent identified above.

If the rights held by the above identified small business concern are not exclusive, each individual, concern or organization having rights in the invention must file separate verified statements averring to their status as small entities, and no rights to the invention are held by any person, other than the inventor, who would not qualify as an independent inventor under 37CFR 1.9(c) if that person made the invention, or by any concern which would not qualify as a small business concern under 37CFR 1.9(d), or a nonprofit organization under 37CFR 1.9(e).

Each person, concern or organization having any rights in the invention is listed below:

☒ No such person, concern, or organization exists.

☐ Each such person, concern or organization is listed below:

Separate verified statements are required from each named person, concern or organization having rights to the invention averring to their status as small entities. (37 CFR 1.27)

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate. (37 CFR 1.28(b))

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this verified statement is directed.

NAME OF PERSON SIGNING **Filippo MONTANARI**

TITLE OF PERSON IF OTHER THAN OWNER **Managing Director**

ADDRESS OF PERSONS SIGNING **Via Provinciale, 116 - 40056 CREPELLANO - ITALY**

SIGNATURE

DATE **June 25, 2001**

Docket No. 34907/GM/lp

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Assignor : Filippo MONTANARI  
Assignee : CALIBE S.r.l.  
Ser. No. : still unknown  
Filed : still unknown  
For : "SHOWER APPARATUS"  
A.U. : still unknown  
Examiner : still unknown

Hon.

The Commissioner of Patents and Trademarks

**BOX P.C.T.**

Washington D.C. 20231 - U.S.A.

**PRELIMINARY AMENDMENT**

Sir,

please enter the following preliminary amendment in the above-identified Application:

substitute the original claims 1 to 19 with the enclosed redrafted claims 20 to 38;

substitute the original abstract with the enclosed redrafted abstract of the disclosure where merely the numeral references have been deleted.

09869841.070601

It is to be noted that the newly submitted claims 20 to 38 and the new abstract of the disclosure do not comprise any new matter but merely more clearly define Applicant's originally disclosed invention.

Respectfully submitted



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Guido MODIANO  
(Reg. No. 19,928)  
Agent for the Applicant  
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20123 MILANO – ITALY  
Tel.: +39-02-85907777

Milan, Italy – June 27, 2001

Encls.: a.a.

09869844.070601

WHAT IS CLAIMED IS:

20. A shower apparatus, comprising an enclosure or a door and a shower tray, wherein said enclosure or door and said shower tray are mutually disconnected, said enclosure or door having means for adjustable connection  
5 to the walls that form a cubicle for accommodating said apparatus.

21. The apparatus according to claim 20, wherein said enclosure, which has, in plan view, a side being shaped like a circular arc with the convexity facing outward, is constituted by a frame having a peripheral seat inside which it is possible to arrange laterally two glazing panels which are  
10 rectangular and flat and are arranged adjacent to said walls.

22. The apparatus according to claim 21, wherein between said glazing panels there is an opening which is adapted to accommodate a door which is shaped like a circular arc and is coupled to said frame by means of two vertical hinges which protrude from said frame along the same axis.

15 23. The apparatus according to claim 20, wherein said adjustable connection means are constituted by two vertical posts, each of which rests in a rear region against one of said walls; by a first profiled element, which is L-shaped and is rigidly coupled to said frame; by first connection screws for the detachable connection of said posts to said walls; and by second  
20 adjustment screws for the adjustable connection of the mutual position of said frame and said posts.

24. The apparatus according to claim 23, wherein each one of said posts is constituted by a second profiled element, which has a C-shaped cross-section which forms a base and two wings, which have the same dimensions  
25 and protrude in the same direction toward said wall.

25. The apparatus according to claim 24, wherein said base of said second profiled element is arranged parallel to said wall and has first holes for detachable connection, by means of said first connection screws, to said wall, in which wall anchors are associated beforehand.

30 26. The apparatus according to claim 23, wherein locking elements are

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associated with each one of said posts and are constituted by nuts which are accommodated within said wings and are provided with second threaded holes whose axis is arranged horizontally, said locking elements being arranged at similar third holes formed in said base of said second profiled element in a staggered position with respect to said first holes.

27. The apparatus according to claim 26, wherein said second adjustment screw has a threaded stem which can be inserted, through said third and second holes, in said locking element or nut, and a head on the lateral surface whereof there is an annular milling.

28. The apparatus according to claim 24, wherein said first profiled element, which has an L-shaped cross-section, is arranged so as to have a first wing which is arranged approximately parallel to said base of said second profiled element and a second wing which is arranged at right angles to said first wing.

29. The apparatus according to claim 28, wherein at least one of said first and second wings has surfaces for coupling to said frame.

30. The apparatus according to claim 28, wherein two or more vertical slots are formed in said first wing, are symmetrical with respect to a central horizontal plane, and are blended, by means of a lateral milling, with a free peripheral edge of said first wing.

31. The apparatus according to claim 28, wherein the dimensions of said lateral milling are such as to allow the insertion and sliding of said head of said second adjustment screw so as to arrange said annular milling at the thickness of said first wing.

32. The apparatus according to claim 24, further comprising, between each one of said first wings and each one of said bases of said posts, a lateral gap for accessing said head of said second adjustment screw, so as to allow the partial screwing-unscrewing thereof for optimum positioning and centering of said enclosure.

33. The apparatus according to claim 32, comprising a strip, which is

magnetic and substantially rectangular, for the connection of each one of said first profiles to each one of said posts, so as to allow to close said lateral gap.

34. The apparatus according to claim 20, wherein said shower tray, rested  
5 on the ground below said enclosure and spaced from a lower peripheral rim thereof, has a peripheral rim which is raised with respect to an internal usable surface.

35. The apparatus according to claims 34, wherein said raised peripheral rim is curved upward in transverse cross-section, said curvature increasing in  
10 height in the part below said enclosure or door.

36. The apparatus according to claims 35, wherein said raised peripheral rim of said shower tray is arranged externally with respect to said lower peripheral rim of said enclosure and has a height from the ground which is greater than a distance from the ground of said lower peripheral rim of said  
15 enclosure.

37. The apparatus according to claim 34, comprising, inside said peripheral rim of said shower tray, a water collection channel which is arranged below said lower peripheral rim of said enclosure and surrounds said usable surface.

20 38. The apparatus according to claim 37, wherein said water collection channel has, with respect to the horizontal plane, an inclined arrangement in order to convey the water to a drain which is arranged along said channel proximate to said door.



ABSTRACT OF THE DISCLOSURE

A shower apparatus, comprising an enclosure or a door and a shower tray, the enclosure or door and the shower tray being mutually disconnected  
5 and the enclosure or door having means for adjustable connection to walls that form a cubicle that accommodates the apparatus.

09869841 070601  
109020 14869860

APPLICATION

FOR

UNITED STATES OF AMERICA

\*\*\*\*\*

SPECIFICATION

TO ALL WHOM IT MAY CONCERN:

Be it known that I,

Filippo MONTANARI  
Italian citizen  
of CRESPPELLANO – ITALY

have invented certain improvements in

“SHOWER APPARATUS”

of which the following description in connection with the accompanying drawings is a specification, like reference characters on the drawings indicating like parts in the several figures.

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6/PRB

09/869841  
JC18 Rec'd PGT/PTO 0 6 JUL 2001

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### BACKGROUND OF THE INVENTION

The present invention relates to a shower apparatus.

Shower apparatuses are currently in use being usually constituted by an enclosure made of a rigid material, for example, glass, Plexiglas or other translucent or transparent material, which is placed for example in a corner of a suitable room or in a recess or along a wall.

The enclosure is therefore for example fixed on two sides to the walls of the room and rests in a downward region on a shower tray.

Resting on the shower tray occurs according to various solutions, since the lower end of the enclosure can rest on the entire upper rim of the shower tray or only on a part thereof, for example by using, on the region adjacent to the door, spacer pins which are arranged between the lower end of the enclosure and the upper rim of the shower tray.

The enclosure is usually constituted by a frame whereto a door is slidably fixed or hinged.

The door can therefore be for example coupled in an upward region to the enclosure frame so that it can slide and can be guided in a downward region on a seat which is rigidly coupled above the upper rim of the shower tray.

As an alternative, the door can slide by resting, on a suitable gasket, on the upper rim of the shower tray.

The main drawback of these conventional shower apparatuses is that unsightly and scarcely hygienic deposits of scale and other matter, accumulations of dirt, mold and bacteria due to stagnation of water after use often form in the points of contact between the enclosure and the shower tray.

These stagnations are often due to difficulty in being able to dry and clean interstices that are present proximate to these resting points, such interstices being also awkward to access because they are arranged at floor level.

Another drawback of conventional shower apparatuses is that they can require, in the resting regions, the presence of gaskets and/or silicone seals which, in addition to be prone to deterioration and unsightly, worsen the noted drawbacks due to water stagnation and entail an additional  
5 intervention during installation.

Another drawback consists in that water can escape due to the contact, which acts as a path for connection to the outside of the shower cubicle, between the enclosure, which is internally wet, and the rim of the shower tray, which is adjacent to the flooring that lies outside the shower cubicle.

10 Another drawback of conventional shower apparatuses is that they have a complicated adjustment, by means of shims, of the position of the enclosure with respect to the walls, this adjustment being necessary because the walls are never perfectly vertical and perpendicular to the floor.

#### SUMMARY OF THE INVENTION

15 The aim of the present invention is to solve the above-noted problems, eliminating the drawbacks of the cited prior art, by providing a shower apparatus which is easy and straightforward to install and clean, avoiding the presence of water stagnation regions which cause, for example, the formation of scale deposits.

20 Within this aim, an object of the invention is to provide a shower apparatus which prevents the escape from the shower cubicle even of minimal amounts of water, thus avoiding the need to subsequently dry up the escaped water and, even more importantly, avoiding the possibility of accidents caused by the fact that someone slips on said water.

25 Another object of the invention is to provide a shower apparatus which achieves the intended aim and objects without requiring the use of unsightly silicone seals and/or gaskets, which would also help to worsen the above-noted problems.

Another object of the invention is to provide a shower apparatus which is  
30 structurally simple and has low manufacturing costs.

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This aim and these and other objects which will become better apparent hereinafter are achieved by a shower apparatus, comprising an enclosure or a door and a shower tray, characterized in that said enclosure or door and said shower tray are mutually disconnected, said enclosure or door having means for adjustable connection to the walls that form the cubicle for accommodating the apparatus.

### BRIEF DESCRIPTION OF THE DRAWINGS

Further characteristics and advantages of the present invention will become better apparent from the following detailed description of a particular embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

Figure 1 is a perspective view of the shower apparatus according to the present invention;

Figure 2 is a perspective view of a detail of the wall anchoring and adjustment system;

Figure 3 is a sectional plan view of a detail of the wall anchoring and adjustment system at minimum extension;

Figure 4 is a sectional plan view of a detail of the wall anchoring and adjustment system at maximum extension;

Figure 5 is a sectional exploded plan view of the elements that compose the anchoring and adjustment system;

Figure 6 is a plan view of the invention;

Figure 7 is a side view of the invention; and

Figure 8 is a sectional side view of the shower tray, taken along a plane which is parallel to a wall.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the figures, the reference numeral 1 designates a shower apparatus which comprises an enclosure or door 2 and a shower tray 3.

The enclosure 2 is arranged in a shower cubicle, designated by the

reference numeral 4, which in this embodiment is delimited by two vertical walls 5a and 5b being advantageously perpendicular one another so as to form a shower corner which accommodates the apparatus 1.

The enclosure 2, seen in plan view, advantageously has a side which is shaped like a circular arc with the convexity facing outward; the enclosure is constituted by a frame, designated by the reference numeral 6, having a peripheral seat 50 inside which two glazing panels 7a and 7b are preferably arranged. The panels are advantageously rectangular and flat and are each arranged adjacent to the walls 5a and 5b.

An opening, designated by the reference numeral 8, is provided between the glazing panels 7a and 7b, advantageously in a central position, and is adapted to accommodate a door 9 which is preferably shaped like a circular arc and is coupled to the frame 6, preferably by means of two vertical hinges 10a and 10b which protrude from the frame along the same axis.

The apparatus 1 has appropriate means for the adjustable connection of the enclosure 2 to the walls 5a and 5b.

Since the connection means are identical for each wall, only the means for connection to the wall 5b are described for the sake of simplicity.

The connection means are constituted by a post, designated by the reference numeral 11b, which rests vertically on the wall 5b; by a first profiled element 12b, which is L-shaped and rigidly coupled to the frame 6; by first connection screws 13b for the removable connection of the post 11b to the wall 5b; and by second adjustment screws 14b for the adjustable connection of the mutual position between frame 6 and post 11b.

The post 11b is constituted by a second profiled element, designated by the reference numeral 15b, having advantageously a C-shaped transverse cross-section which has a base, designated by the reference numeral 17b, and two wings 18b which advantageously have the same dimensions and protrude, in the same direction, toward the wall 5b.

The base 17b of the second profiled element 15b is advantageously

arranged parallel to the wall 5b and has first holes, not shown, which are adapted for detachable connection, by means of the first connecting screws 13b, to the wall 5b, in which adapted wall anchors are associated beforehand.

- 5      Locking elements are associated with the post 11b and are constituted by nuts 19b which are accommodated within the wings 18b and are provided with second threaded holes 20b which have a horizontal axis and are arranged at similar third holes 21b which are formed in the base 17b of the second profiled element, in a staggered position with respect to the first  
10      holes.

The second adjustment screw 14b has a threaded stem 22b which can be inserted, through said third and second holes 21b and 20b, in the locking element or nut 19b, and a head, designated by the reference numeral 23b, on the lateral surface 24b whereof there is an annular milling 25b.

- 15      The first profiled element 12b, which has an advantageously L-shaped cross-section, is arranged so as to have a first wing 26b being approximately parallel to the base 17b of the second profiled element and a second wing 27b being advantageously perpendicular to the first wing 26b.

- 20      At least one of the two wings 26b and 27b has surfaces for coupling, advantageously by welding or gluing, to the frame 6.

Two or more vertical slots, designated by the reference numeral 28b, are formed in the first wing 26b and are advantageously symmetrical with respect to a horizontal central plane and are blended, by means of a lateral milling 51, with the free peripheral edge 52 of the wing 26b.

- 25      The dimensions of the lateral milling 51 are such as to allow the insertion and sliding of the head 23b of the second adjustment screw 14b, so as to arrange the annular milling 25b at the thickness of the first wing 26b.

- 30      A lateral gap, designated by the reference numeral 29b and formed between the first wing 26b and the base 17b of the post 11b, allows access to the head 23b of the second adjustment screw 14b so as to allow partial

screwing-unscrewing thereof for optimum positioning and centering of the enclosure 2.

A strip, designated by the reference numeral 30b, is advantageously magnetic and is substantially rectangular, and allows the connection  
5 between the first profiled element 12b and the post 11b, thus closing the lateral gap 29b.

Below the enclosure 2, and spaced from the lower peripheral rim 53 thereof, the shower tray 3 is rested on the ground and has, at least at an arc-like side designated by the reference numeral 31, a peripheral rim 32 which  
10 is raised with respect to an internal useful surface designated by the reference numeral 33.

The raised peripheral rim 32 has, in a transverse cross-section, a configuration which curves upward and increases in height advantageously in the part that lies under the door 9.

An internal channel 34 for collecting water is adjacent to the peripheral  
15 rim 32 and surrounds the internal useful surface 33.

The collection channel 34, arranged downward with respect to the lower peripheral rim 53 of the enclosure 2, is inclined on the plane in order to convey the water to a drain, designated by the reference numeral 35, which  
20 is advantageously arranged along the channel 34 proximate to the door 9.

Use is thus as follows: with reference to Figure 1, the first assembly operation consists in positioning and coupling, by way of conventional methods, the shower tray 3 to the floor of the cubicle 4 that accommodates the apparatus 1, which is conveniently arranged so as to rest laterally against  
25 the respective walls 5a and 5b.

Then the two posts are fixed, by means of the first connecting screws, to the respective walls 5a and 5b, so that the posts are conveniently arranged within the arc-like side 31 of the shower tray 3.

Then the enclosure 2 is assembled on the ground, associating the frame 6  
30 with the glazing panels 7a and 7b and with the door 9.



Since the enclosure 2 is fully symmetrical, it can be turned upside down so as to determine at will the direction in which the door 9 opens.

The enclosure 2 is thus installed so as to be suspended on both posts by arranging the vertical slots in the respective annular millings formed in the heads of the adjustment screws.

It is thus possible to adjust the position and centering of the enclosure 2 with respect to the walls 5a and 5b by partially screwing or unscrewing the adjustment screws.

This intervention is allowed after installation because access to the adjustment screws occurs by means of the two lateral gaps that are present between the first profiled elements and the respective posts.

The gaps can be closed, once centering has been performed, by means of the appropriately provided strips, so as to protect the inside of the lateral gaps from water or any dirt and at the same time ensure an effective aesthetic impact.

During use, water flows by gravity from the internal surfaces of the enclosure 2 toward the lower peripheral rim 53 thereof, drips from there inside the shower tray 3, and is conveyed, by means of a system of slopes, first into the channel 34 and then into the drain 35.

It has thus been observed that the invention has achieved the intended aim and objects, a shower apparatus having been provided which is simple to install and easy and straightforward to clean, since there is no contact between the shower enclosure, which is suspended from two lateral posts, and the underlying shower tray.

The invention is of course susceptible of numerous modifications and variations, all of which are within the scope of the same inventive concept.

The materials used, as well as the dimensions that constitute the individual components of the invention, may of course be more pertinent according to specific requirements.

The disclosures in Italian Patent Application No. TV99A000127 from

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1990/07-1456386

which this application claims priority are incorporated herein by reference.

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CLAIMS

1. A shower apparatus, comprising an enclosure or a door and a shower tray, characterized in that said enclosure or door and said shower tray are mutually disconnected, said enclosure or door having means for adjustable  
5 connection to the walls that form a cubicle for accommodating said apparatus.

2. The apparatus according to claim 1, characterized in that said enclosure, which has, in plan view, a side being shaped like a circular arc with the convexity facing outward, is constituted by a frame having a  
10 peripheral seat inside which it is possible to arrange laterally two glazing panels which are rectangular and flat and are arranged adjacent to said walls.

3. The apparatus according to claims 1 and 2, characterized in that between said glazing panels there is an opening which is adapted to  
15 accommodate a door which is shaped like a circular arc and is coupled to said frame by means of two vertical hinges which protrude from said frame along the same axis.

4. The apparatus according to claims 1 and 3, characterized in that said adjustable connection means are constituted by two vertical posts, each of  
20 which rests in a rear region against one of said walls; by a first profiled element, which is L-shaped and is rigidly coupled to said frame; by first connection screws for the detachable connection of said posts to said walls; and by second adjustment screws for the adjustable connection of the mutual position of said frame and said posts.

5. The apparatus according to claims 1 and 4, characterized in that each one of said posts is constituted by a second profiled element, which has a C-shaped cross-section which forms a base and two wings, which advantageously have the same dimensions and protrude in the same  
direction toward said wall.

6. The apparatus according to claims 1 and 5, characterized in that said  
30

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base of said second profiled element is arranged parallel to said wall and has first holes for detachable connection, by means of said first connection screws, to said wall, in which adapted wall anchors are associated beforehand.

- 5        7. The apparatus according to claims 1 and 6, characterized in that locking elements are associated with each one of said posts and are constituted by nuts which are accommodated within said wings and are provided with second threaded holes whose axis is arranged horizontally, said locking elements being arranged at similar third holes formed in said  
10 base of said second profiled element in a staggered position with respect to said first holes.

8. The apparatus according to claims 1 and 7, characterized in that said second adjustment screw has a threaded stem which can be inserted, through said third and second holes, in said locking element or nut, and a head on  
15 the lateral surface whereof there is an annular milling.

9. The apparatus according to claims 1 and 8, characterized in that said first profiled element, which advantageously has an L-shaped cross-section, is arranged so as to have a first wing which is arranged approximately parallel to said base of said second profiled element and a second wing  
20 which is arranged at right angles to said first wing.

10. The apparatus according to claims 1 and 9, characterized in that at least one of said first and second wings has surfaces for coupling to said frame.

11. The apparatus according to claims 1 and 10, characterized in that two  
25 or more vertical slots are formed in said first wing, are symmetrical with respect to a central horizontal plane, and are blended, by means of a lateral milling, with the free peripheral edge of said first wing.

12. The apparatus according to claims 1 and 11, characterized in that the dimensions of said lateral milling are such as to allow the insertion and  
30 sliding of said head of said second adjustment screw so as to arrange said

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annular milling at the thickness of said first wing.

13. The apparatus according to claims 1 and 12, characterized in that it has, between each one of said first wings and each one of said bases of said posts, a lateral gap for accessing said head of said second adjustment screw,  
5 so as to allow the partial screwing-unscrewing thereof for optimum positioning and centering of said enclosure.

14. The apparatus according to claims 1 and 13, characterized in that it has a strip, which is magnetic and substantially rectangular, for the connection of each one of said first profiles to each one of said posts, so as  
10 to allow to close said lateral gap.

15. The apparatus according to one or more of the preceding claims, characterized in that said shower tray, rested on the ground below said enclosure and spaced from the lower peripheral rim thereof, has a peripheral rim which is raised with respect to an internal usable surface.

16. The apparatus according to claims 1 and 15, characterized in that said raised peripheral rim is curved upward in transverse cross-section, said curvature increasing in height in the part below said enclosure or door.

17. The apparatus according to claims 1 and 16, characterized in that said raised peripheral rim of said shower tray is arranged externally with respect  
20 to said lower peripheral rim of said enclosure and has a height from the ground which is greater than the distance from the ground of said lower peripheral rim of said enclosure.

18. The apparatus according to claims 1 and 17, characterized in that it has, inside said peripheral rim of said shower tray, a water collection  
25 channel which is arranged below said lower peripheral rim of said enclosure and surrounds said usable surface.

19. The apparatus according to claims 1 and 18, characterized in that said collection channel has, with respect to the horizontal plane, an inclined arrangement in order to convey the water to a drain which is arranged along  
30 said channel proximate to said door.

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## SHOWER APPARATUS

ABSTRACT OF THE DISCLOSURE

A shower apparatus, comprising an enclosure or a door (2) and a shower tray (3), the enclosure or door and the shower tray being mutually  
5 disconnected and the enclosure or door having means for adjustable connection to walls (5a,5b) that form a cubicle (4) that accommodates the apparatus.

(Figure 1)

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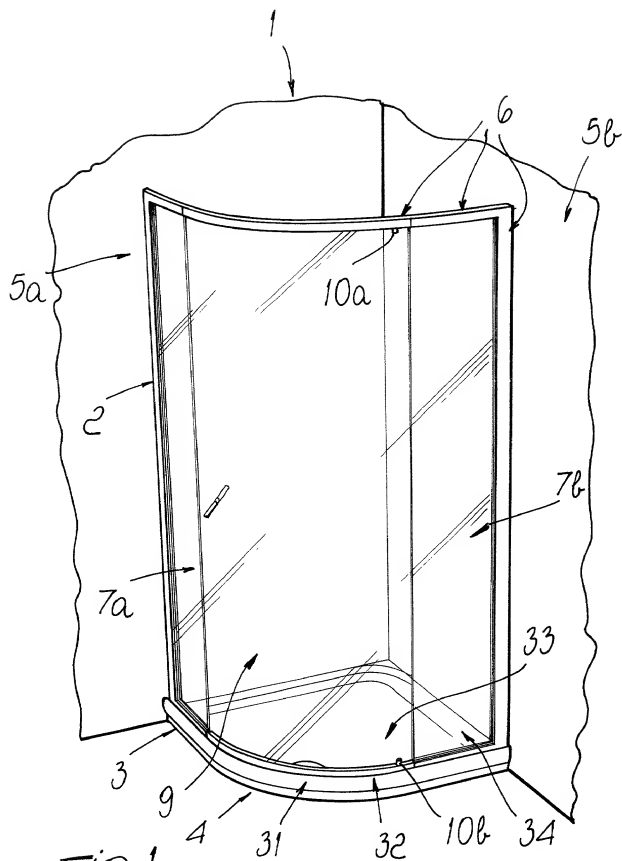
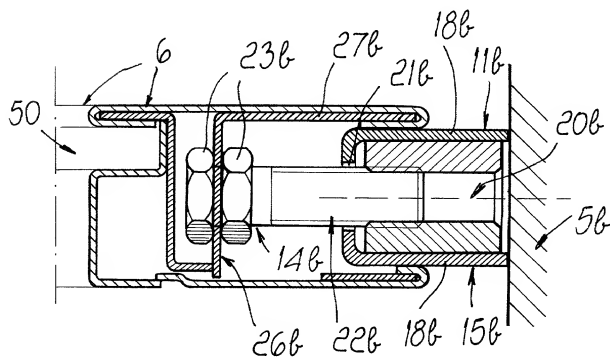
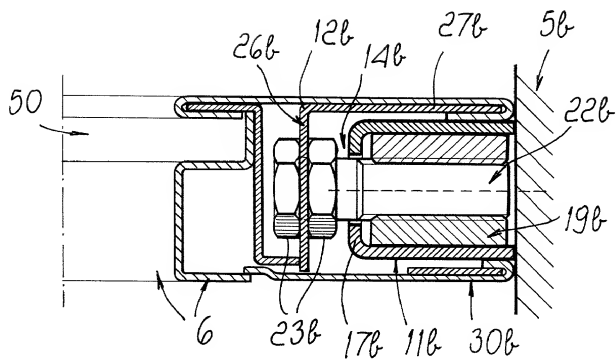


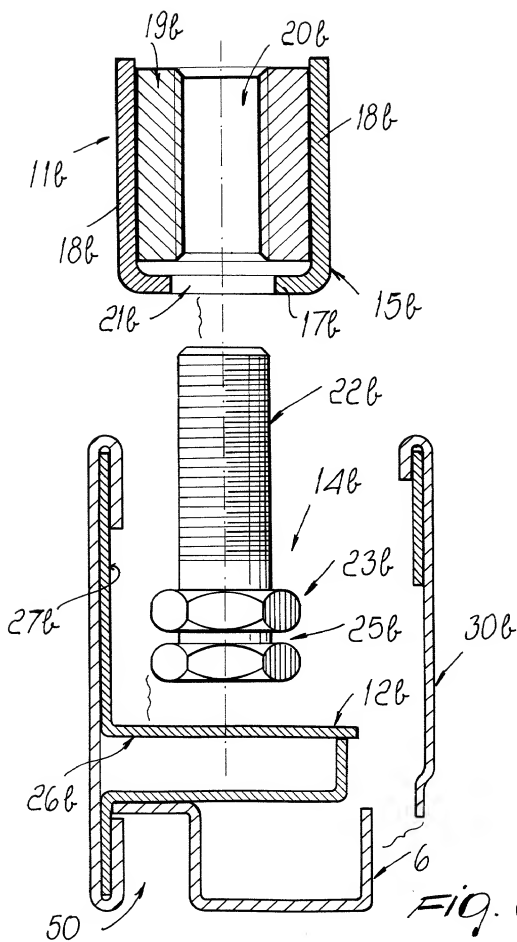
Fig. 1

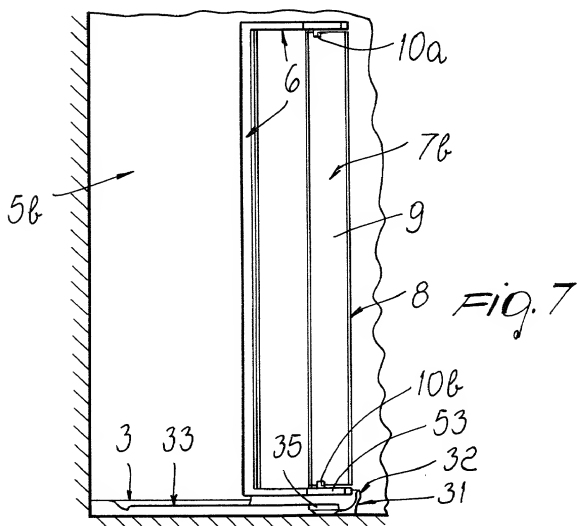
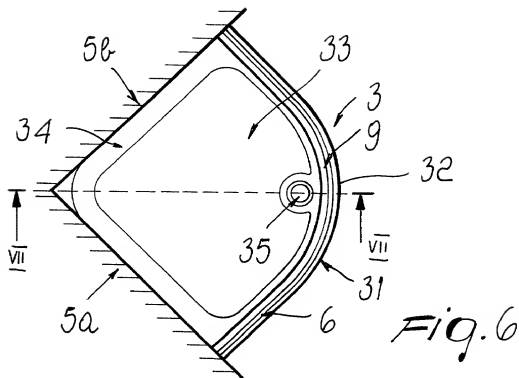


Fig. 2











PATENT

Attorney's Docket No. 34907/GM/1p

COMBINED DECLARATION AND POWER OF ATTORNEY

(ORIGINAL, DESIGN, NATIONAL STAGE OF PCT, SUPPLEMENTAL, DIVISIONAL,  
CONTINUATION OR CIP)

As a below named inventor, I hereby declare that:

TYPE OF DECLARATION

This declaration is of the following type: (check one applicable item below)

☒ original

☐ design

NOTE: If the declaration is for an International Application being filed as a divisional, continuation or continuation-in-part application do not check any of next two items and check appropriate one of last three items.

☒ national stage of PCT

☐ supplemental

NOTE: If one of the following 3 items apply then complete and also attach ADDED PAGES FOR DIVISIONAL, CONTINUATION OR CIP.

☐ divisional

☐ continuation

☐ continuation-in-part (CIP)

INVENTORSHIP IDENTIFICATION

**WARNING:** If the inventors are each not the inventors of all the claims an explanation of the facts, including the ownership of all the claims at the time the last claimed invention was made, should be submitted.

My residence, post office address and citizenship are as stated below next to my name. I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

TITLE OF INVENTION

SHOWER APPARATUS

SPECIFICATION IDENTIFICATION

the specification of which: (complete (a), (b) or (c))

(a) ☒ is attached hereto.

(b) ☐ was filed on \_\_\_\_\_ as ☐ Serial No. \_\_\_\_\_  
or ☐ Express Mail No., as Serial No. not yet known \_\_\_\_\_  
and was amended on \_\_\_\_\_ (if applicable).

NOTE: Amendments filed after the original papers are deposited with the PTO which contain new matter are not accorded a filing date by being referred to in the declaration. Accordingly, the amendments involved are those filed with the application papers or, in the case of a supplemental declaration, are those amendments claiming matter not encompassed in the original statement of invention or claims. See 37 CFR 1.57.

(Declaration and Power of Attorney [1-1]—page 1 of 1)

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(c) ☒ was described and claimed in PCT International Application No. PCT/EP00/11159 filed on November 10, 2000 and as amended under PCT Article 19 on \_\_\_\_\_ (if any).

**ACKNOWLEDGEMENT OF REVIEW OF PAPERS AND DUTY OF CANDOR**

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56(a).

☒ In compliance with this duty there is attached an information disclosure statement. 37 CFR 1.97.

**PRIORITY CLAIM**

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international application(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed.

(complete (d) or (e))

(d) ☐ no such applications have been filed.

(e) ☒ such applications have been filed as follows

NOTE: Where item (c) is entered above and the International Application which designated the U.S. claimed priority check item (e), enter the details below and make the priority claim.

**EARLIEST FOREIGN APPLICATION(S), IF ANY FILED WITHIN 12 MONTHS  
(6 MONTHS FOR DESIGN) PRIOR TO THIS U.S. APPLICATION**

| COUNTRY | APPLICATION NUMBER | DATE OF FILING<br>(month, day, year) | PRIORITY CLAIMED<br>UNDER 37 USC 119                                |
|---------|--------------------|--------------------------------------|---|
| ITALY   | TV99A000127        | NOVEMBER 18, 1999                    | <input checked="" type="checkbox"/> YES NO <input type="checkbox"/> |
| WIPO    | PCT/EP00/11159     | NOVEMBER 10, 2000                    | <input checked="" type="checkbox"/> YES NO <input type="checkbox"/> |
|         |                    |                                      | <input type="checkbox"/> YES NO <input type="checkbox"/>            |
|         |                    |                                      | <input type="checkbox"/> YES NO <input type="checkbox"/>            |
|         |                    |                                      | <input type="checkbox"/> YES NO <input type="checkbox"/>            |

**ALL FOREIGN APPLICATION(S), IF ANY FILED MORE THAN 12 MONTHS  
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# POWER OF ATTORNEY

As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith. (List name and registration number)

Guido MODIANO (Reg. No. 19,928)

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## DECLARATION

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

## SIGNATURE(S)

1-60  
Full name of **sole or first inventor** Filippo MONTANARI  
Inventor's signature *Filippo Montanari*  
Date June 25, 2001 Country of Citizenship ITALY  
Residence CRESPELLANO - ITALY  
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Full name of **second joint inventor**, if any \_\_\_\_\_  
Inventor's signature \_\_\_\_\_  
Date \_\_\_\_\_ Country of Citizenship \_\_\_\_\_  
Residence \_\_\_\_\_  
Post Office Address \_\_\_\_\_

Full name of **third joint inventor**, if any \_\_\_\_\_  
Inventor's signature \_\_\_\_\_  
Date \_\_\_\_\_ Country of Citizenship \_\_\_\_\_  
Residence \_\_\_\_\_  
Post Office Address \_\_\_\_\_

CHECK PROPER BOX(IES) IF ANY OF THE FOLLOWING ADDED PAGE(S) FORM A  
PART OF THIS DECLARATION

- ☐ Signature for third and subsequent joint inventors. Number of pages added \_\_\_\_\_
- ☐ Signature by administrator(trix), executor(trix) or legal representative for deceased or incapacitated inventor. Number of pages added \_\_\_\_\_
- ☐ Signature for inventor who refuses to sign or cannot be reached by person authorized under 37 CFR 1.47. Number of pages added \_\_\_\_\_
- ...
- ☐ Added pages to combined declaration and power of attorney for divisional, continuation, or continuation-in-part (CIP) application.  
☐ Number of pages added \_\_\_\_\_
- ...

If no further pages form a part of this Declaration then end this Declaration with this page and check the following item

☒ This declaration ends with this page